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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,244	06/05/2006	Kai Dolling	Muller-52	8017
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SUITE 975				
HOUSTON, TX 77057				
EXAMINER				
FIORITO, JAMES				
ART UNIT		PAPER NUMBER		
1793				
MAIL DATE		DELIVERY MODE		
08/17/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/564,244

Applicant(s)

DOLLING ET AL.

Examiner

JAMES A. FIORITO

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/2/10.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-12 and 14-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-12 and 14-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-12, and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koch US 3152865 in view of Noweck US 6773690.

Koch teaches a process of making boehmite alumina by hydrothermal aging of an aluminum alcoholate (Column 1 Lines 35-45) in the presence of a chelating agent comprised of an organic component containing multi carboxylate ions or a polycarboxylic radical (Column 3 Lines 15-29). The chelating agent is generally used in an amount of about 0.5% to 3% of the dry alumina (Column 2 Lines 44-45). The pH of the mixture is greater than 7, preferably between 8 and 9.5 (Column 2 Lines 35-40).

Koch does not teach that the aging process is performed at temperature between 120 and 250 degrees C.

Noweck teaches a process of making boehmitic aluminas, where in a metallic or nonmetallic oxide, or oxide hydrate is present in a hydrothermal aging process, requiring an aging temperature of between 40 and 240 degrees C (Column 3 Lines 5-13).

At the time of invention it would have been obvious to a person of ordinary skill in the art to form the process of Koch including the use of a metallic or nonmetallic oxide, or oxide hydrate in the hydrothermal aging process, requiring an aging temperature of

between 40 and 240 degrees C in view of the process of Noweck. The suggestion or motivation for doing so would have been to make crystalline boehmite aluminas (Column 3 Lines 5-13).

Koch does not expressly state that the hydrolysis is carried out at a temperature of from 50 to 95 degrees C.

Noweck teaches that hydrolysis of aluminum alkoxides may be performed at a temperature generally between 60 to 100 degrees C (Column 2 Lines 35-40).

At the time of invention it would be obvious to one of ordinary skill in the art to perform the hydrolysis step of Koch (Column 1 Lines 34-44) at a temperature between 60 and 100 degrees C in view of the teaching of Noweck. The suggestion or motivation would be to provide a temperature to the process required by Koch but not disclosed.

With respect to claim 2, the chelating agent may be added in an amount of *about* 0.5 to 2%, which would include at least 0.4%.

With respect to claim 3, the chelating agent may be oxalic or tartaric acid (Column 3 Line 25).

With respect to claim 4, Noweck teaches that hydrolysis of aluminum alkoxides may be performed at a temperature generally between 60 to 100 degrees C (Column 2 Lines 35-40).

With respect to claim 6, Noweck teaches a process of making boehmitic aluminas, where in a metallic or nonmetallic oxide, or oxide hydrate is present in a hydrothermal aging process, requiring an aging temperature of between 40 and 240 degrees C (Column 3 Lines 5-13).

With respect to claim 7, Koch teaches the alumina content may be 13% (Example 1).

With respect to claims 8-12, the product obtained by the process of Koch in view of Noweck would be expected to possess these product limitation, since the process of making the product is obvious.

With respect to claim 14, use of alumina as a catalyst carrier is one of the most common uses of alumina.

Response to Arguments

Applicant's arguments filed 7/2/10 have been fully considered but they are not persuasive.

Applicant argues that the amendment of 7/2/10 including the limitation "to provide a boehmetric alumina having an alpha conversion temperature of 1350 degrees C and higher" overcomes the prior art. In response, Noweck teaches the alumina product exhibits theta phase alumina when calcination is performed at 1200 degrees C (Example 2). Therefore, of ordinary skill in the art would expect for the product of Noweck to exhibit alpha phase alumina at calcination temperatures of 1300 degrees C or higher, because alpha phase is obtained at higher temperatures than theta phase alumina (See Noweck Column 1 Lines 30-32).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES A. FIORITO whose telephone number is (571)272-7426. The examiner can normally be reached on 9am - 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James A Fiorito/
Examiner, Art Unit 1793

/Stanley Silverman/
Supervisory Patent Examiner, Art Unit 1793